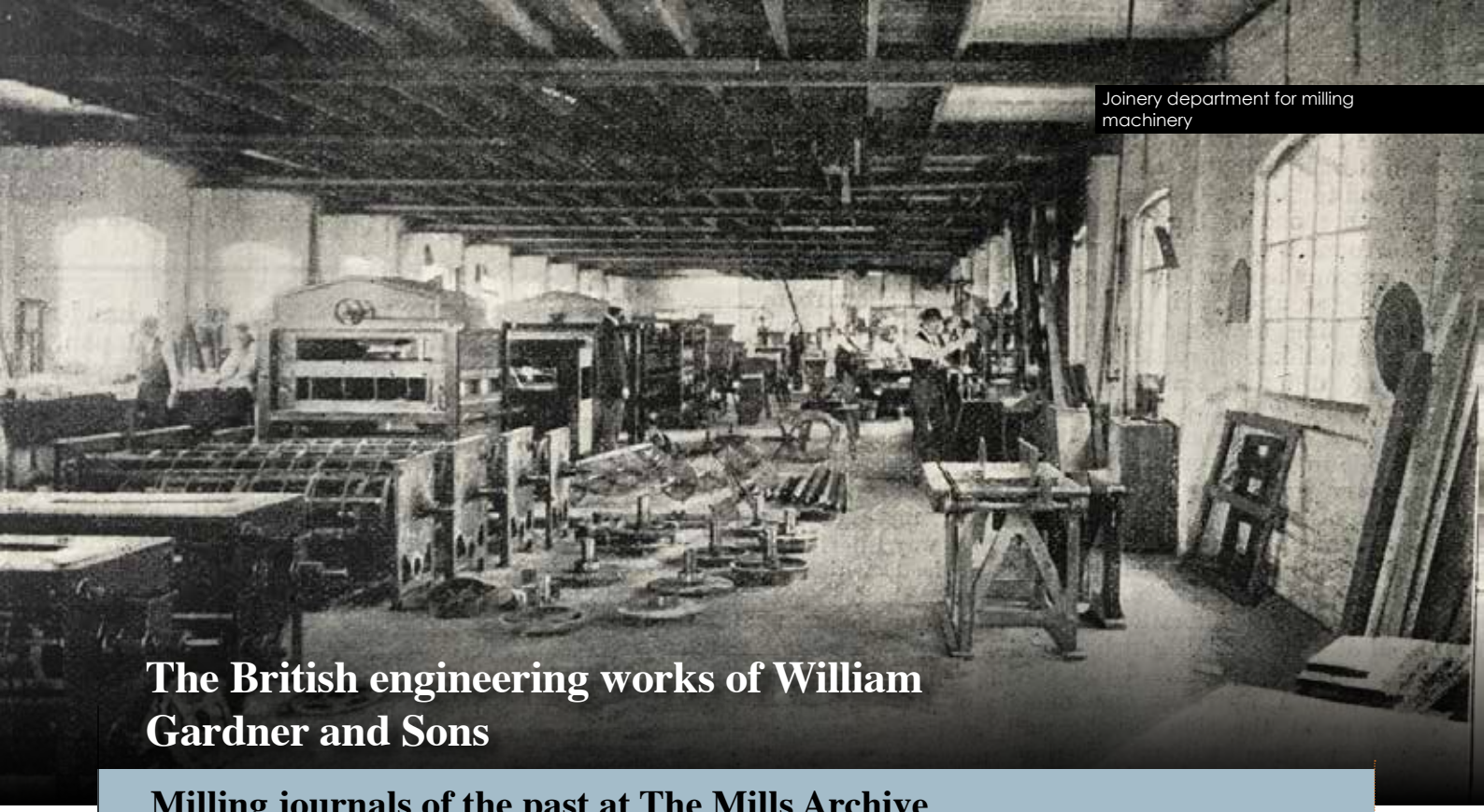


Joinery department for milling machinery

The British engineering works of William Gardner and Sons

Milling journals of the past at The Mills Archive

by Mildred Cookson, The Mills Archive, UK

A year ago in Milling and Grain I featured William Gardner of Gloucester in a brief review of 10 succesful milling engineers with works in the UK. I have now found that The Miller (5 August 1895) provides a detailed account of this highly regarded firm, well known in Gloucester and the West of England since the 1870s. The firm underwent several moves since it was founded around 1860, culminating in new premises in Bristol Road, completed when the plant was installed in June 1894. Once established there Mr. Gardner took into partnership his sons, Charles and Alfred, styling the firm as William Gardner and Sons.

The ground floor offices accommodated a little room in which a telephone was installed so Mr. Gardner could take a call immediately from a client "in any part of the kingdom" as well as a strong room with an iron door for holding valuable papers which "would withstand a charge of dynamite"! Charles Gardner, as general manager of the works could see, through a glass window, the whole length of the fitting and turning shop, which ran longitudinally to the offices.

There was also a room near the offices for storing large quantities of Dufour's silks in presses, so arranged that any particular number or quality could be taken out immediately. There was a storeroom for mill furnishings, with a large stock of hoist chains, brooms, sack trucks, bolts, butts and brasses as well as all kinds of lubricators.

The fitting shop was supported on two rows of iron columns carrying a line of shafting and held all kinds of machines being made ready for work. At the time of the report, there was a large power friction hoist, a large elevator bottom, and a gigantic patent Rapid mixer with a capacity of half a ton on view. Roller mills were evident in all stages of completion as well as centrifugals and ordinary reels, rotary scalpers etc. There was a fine lathe capable of turning 20 feet of shafting and of boring out large wheels. An overhead crane served the whole length of the shop.

Gardner devoted much time and attention to the grinding and grooving of their rollers in a separate department furnished with the latest design of grinding and grooving machines. Rolls were sent from all parts of England and Ireland to be grooved, where

Showroom for finished machines

"Rapid" sifting and mixing machinery department

any spiral or shape, or number of corrugations could be readily matched. On the opposite side to the erecting shop were double roll grooving and grinding machines, both served by travelling cranes. These were of the horizontal pattern and fitted with automatic reversing gear. Close by the engine house was a smithy with power driven forges capable of heating iron and steel goods of any size. Outside the fitting shop a large yard held a shed containing a wide selection of iron bars and in another, planks of raw wood were dried. Particular attention was paid to cog gearing timbers such as hornbeam, crab tree etc of which they held enormous stocks. Another shed contained pulleys, hangers, power possers and worms etc.

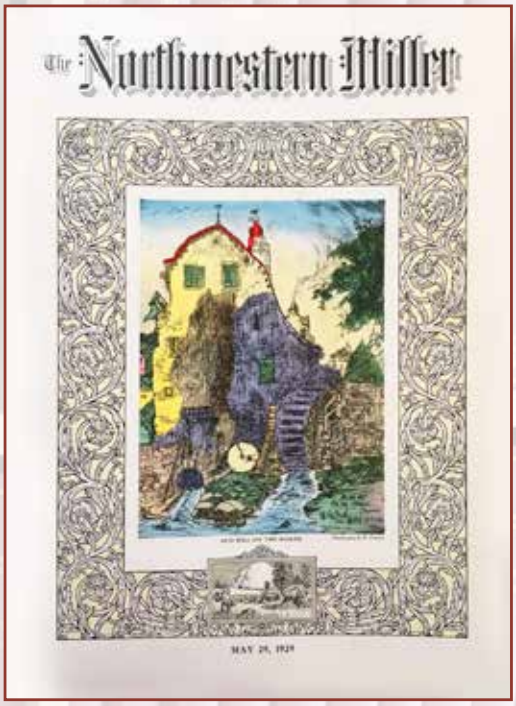
The millstone department stood by itself. One shed contained a line of hurstings, another a collection of rough stones ready for millstone building, with the finished stones stored separately. Although the millstone had seen its day in flour milling, there were yet many industries in which grinding stones of different patterns and diameters were used and Gardner did a fair trade in these.

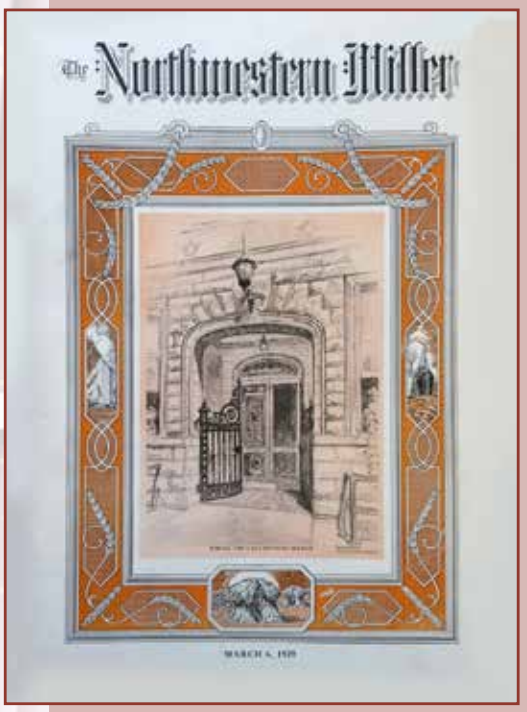
The firm's work with smaller mills featured in their advertising and is nicely illustrated with a tender from July 1894 in one of the Mills Archive collections offering the miller new equipment that would "make you a very pretty mill".

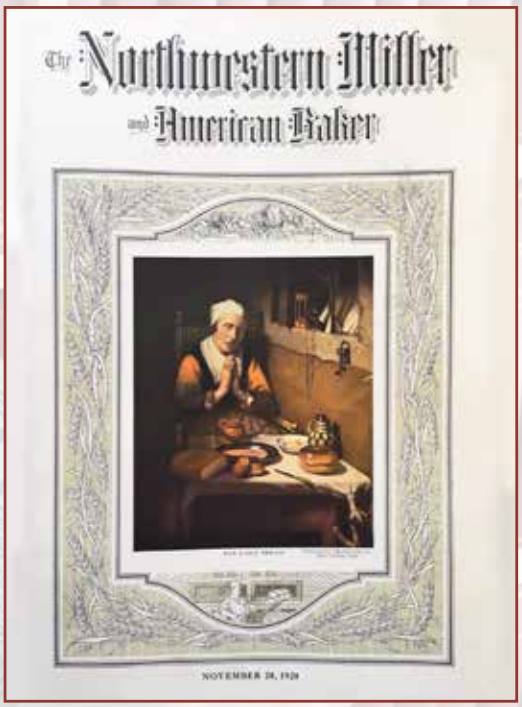
The upper floor held a fine showroom filled with finished machines ready to leave the works. A line of Gardner's well-known roller mills made an excellent impression.

These mills were of different sizes, fitted with rollers of different diameters, varying between six, seven and nine inches. The length of these rolls varied from 12 to 30 inches. The usual type of double roller mill made in these works was fitted with two feed rolls, and had a division in the hopperings so could be used, if desired, on two different classes of material at the same time, more or less

1888 Advertisement emphasising Gardner's work for mills of all sizes







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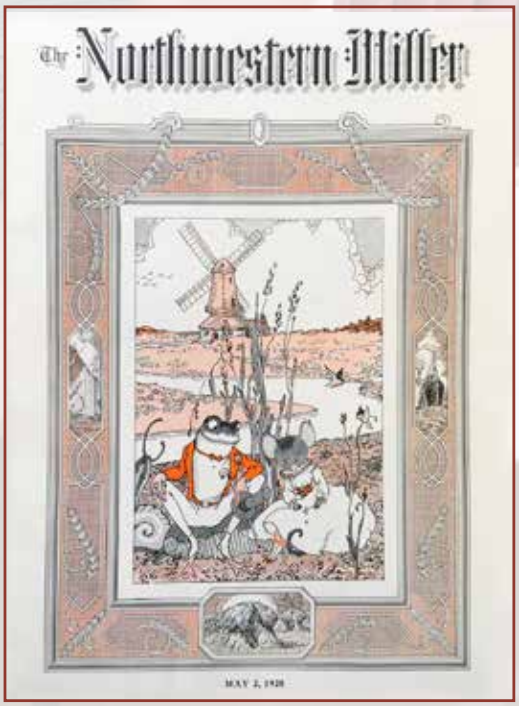

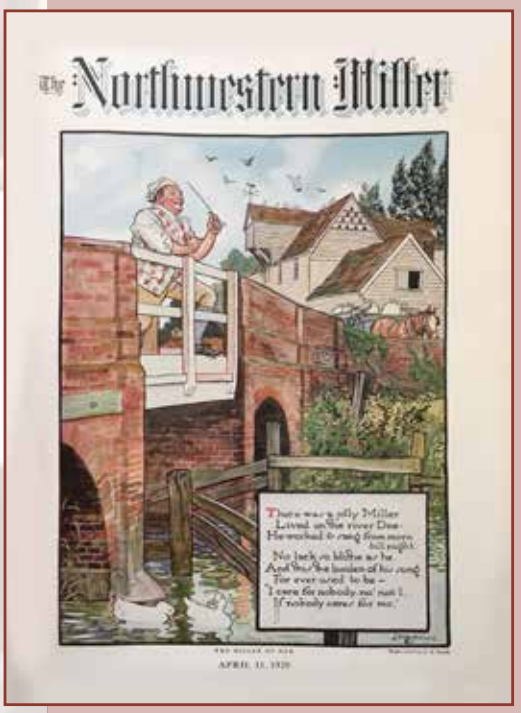

Milling and Grain supports the aims and objectives of the Mills Archive Trust, based in Reading, England.

The history of milling - no matter where it has taken place - is being archived by the Trust.

For well over 100 years milling technology has been global with many magazines serving or having served our industry from flour and food to feed and oilseed processing and now to fish feeds.

A most recent contribution to the Trust's collection is a complete century of past edition of the now out-of-print 'North-Western Miller' from the United States.

We are proud to present here, front cover illustrations from this valued and long-serving publication as a visual reminder of the importance contribution past magazines provided to our industry.

Milling and Grain est:1891

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pressure could be put on one pair of rolls without in any way interfering with the other pair.

There was also a sensitive automatic feed that had a very simple design. At any moment the feed itself could be cut off without any alteration of the feed adjustments, by merely throwing out of gear a small clutch, the handle of which was conveniently placed by the side of the feed roll driving pulley.

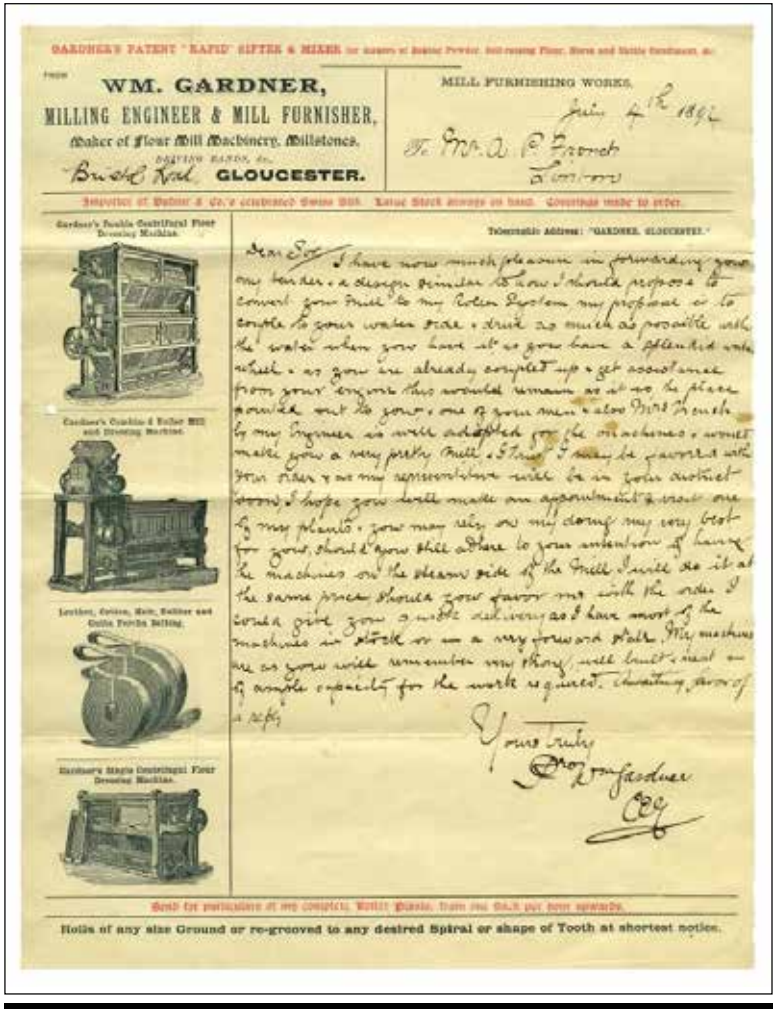
The two pairs of rolls would be thrown apart at one time by a lever attached to a double eccentric at the side of the mill, and returned to their original position without altering any of the roll adjustments.

The cast iron frames in which the mills were fitted were very rigid, and at each side of the case filleted pieces were arranged so that whenever necessary, the rolls could be easily and quickly changed, without removing the hopper. All the adjustments were outside the frame; the arrangement rendering it easier to take the mill to pieces whenever that operation appeared advisable.

There was a special room used as a store for Gardner's patent "Rapid" sifters and mixers, containing all sizes from a small seven-pound machine to a half-tonne mixer. The hoppers were not constructed from thin strips of wood as many other machines were, but of a single piece of wood. A machine in the testing area was being shown as singularly effective in dealing with canary and linseed. It was fitted with a dickey sieve, and combined sieving with a reduction action for large lumps of dirt, aspirated by a powerful fan.

Throughout the buildings a tramway system was used in addition to the travelling cranes, underlining the labour saving principles, which the business emphasised.

The geographical and historical spread of our holdings at the Mills Archive mean that I can only provide snapshots; if you would like to know more please email me at mills@millsarchive.org.



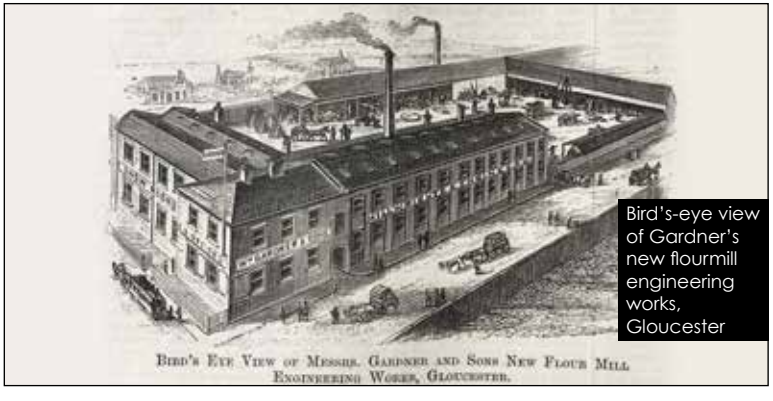
GARDNER'S PATENT "RAPID" SIFTER & MIXER

WM. GARDNER,
MILLING ENGINEER & MILL FURNISHER,
Maker of Flour Mill Machinery, Millstones,
GLOUCESTER.

MILL FURNISHING WORKS.

Holds of any size Ground or re-grooved to any desired Spiral or shape of Tooth at shortest notice.

Covering letter for tender by W Gardner to install a roller mill system



Bird's-eye view of Gardner's new flourmill engineering works, Gloucester

BIRD'S EYE VIEW OF MESSRS. GARDNER AND SONS NEW FLOUR MILL ENGINEERING WORKS, GLOUCESTER.